



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,953	08/21/2003	Takayuki Araki	Q76963	6799
23373	7590	09/30/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			HU, HENRY S	
			ART UNIT	PAPER NUMBER
			1713	

DATE MAILED: 09/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

15

Office Action Summary	Application No. 10/644,953	Applicant(s) ARAKI ET AL.	
	Examiner Henry S. Hu	Art Unit 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on IDS of 12-9-2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-25 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2 pages</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. It is noted that Applicants' two IDS' filed on August 21, 2003 and December 9, 2003 were received respectively. It is also noted that Applicants' priority paper filed on October 10, 2003 was received. **Claims 1-25 are now pending with a total of thirteen independent claims (Claims, 1-6, 9, 11-15 and 17).** An action follows.

Election/Restrictions

2. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions, which are not so linked as to form a single general inventive concept under PCT Rule 13.1, this is based on the preliminary search done by the examiner.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

I. **Claims 1-10, drawn to fluorinated ethylenic monomers having hydroxyl** (formula (1a) of $CX^1X^2=CX^3-(Rf^3)_a-C(Rf^1)(Rf^2)-OH$) with factors of X^1 and X^2 can be the same or different from H or F; X^3 is H, F, Cl, or CF_3 with the condition as at least one of X is H,

Art Unit: 1713

and all X can not be H); Rf^1 and Rf^2 are the same or different perfluoroalkyl group, while Rf^3 can be alkylene or alkylene ether; and a can be 0 or 1, classified in class 526, subclass 242.

II. **Claims 11 and 13**, drawn to a specific a specific **fluorinated ethylenic monomer having fluoroalkyl carbonyl group with formula (21) of $CH_2=CF-CF_2-(Rf^p)_a-C(=O)-Rf^1$** , classified in class 526, subclass 244.

III. **Claim 12**, drawn to a specific **fluorinated ethylenic monomer having fluoroalkyl carbonyl group with formula (23) of $CX^1X^2=CX^3-C(=O)-Rf^1$** , classified in class 526, subclass 244.

IV. **Claim 14**, drawn to a specific **fluorinated ethylenic monomer having fluoroalkyl carbonyl group with formula (25) of $CF_2=CF-O-(CF_2-CF(CF_3)-O)_c-(CF_2)_d-C(=O)-Rf^1$** , classified in class 526, subclass 247.

V. **Claims 15-16, 18, 20-21 and 24**, drawn to **a photoresist composition** comprising a polymer having a structural unit from a fluorinated ethylenic monomers having hydroxyl, classified in class 526, subclass 244.

VI. **Claims 17, 19, 22-23 and 25**, drawn to **a different photoresist composition** comprising a polymer having a structural unit from a fluorinated ethylenic monomers having hydroxyl (with a specific formula 50 for hydroxyl), classified in class 526, subclass 242.

Art Unit: 1713

3. In the case Group I is elected, the Applicants need to further elect one of the following four species where **Claims 1, 7 and 9-10 are generic**:

Species (1): $a = 0$ (Claim 4)

Species (2): $a = 1$; $X^1 = X^2 = H$; $X^3 = F$ (Claims 2 and 5)

Species (3): $a = 1$; $X^1 = X^2 = X^3 = F$ (Claims 3, 6 and 8)

4. The inventions are distinct, each from the others because of the following reasons:

All invention groups are unrelated each other. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different same functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, Groups I, II, III and IV are each related to a monomer, while Groups V and VI are each related to a photoresist composition. Additionally, monomers from Groups I, II, III and IV are structurally quite different either in ethylenic moiety or pendant group; while photoresist compositions from Groups V and VI are each using structurally quite different fluoropolymers.

5. In a very close examination, Groups I, V and VI are related to monomers of **fluorinated ethylenic monomers having hydroxyl group**, while Groups II, III and IV are related to **fluorinated ethylenic monomer having fluoroalkyl carbonyl group**. **They are “eight” (not six) different inventions** since all the three hydroxyl-containing species in Group 1 are different monomers in view of the factors on “a” and “X”. **Therefore, in the election of Group I with species election, the Applicants are advised to regroup the related claims.** Should applicant

Art Unit: 1713

traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

6. Where the group of inventions is claimed in one and the same international application, the requirement for unity of invention referred to in Rule 13.1 shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features. The expression “**special technical features**” shall mean those technical features that define a contribution which each of the claimed inventions considered as a whole, **makes over the prior art**. The inventions listed as Groups I to VI do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, although they share the special technical feature, this special technical feature does not define a contribution over the prior art for the following reasons:

7. Claims 15-16, 18, 20-21 and 24 as well as Claims 17, 19, 22-23 and 25 are either obvious or anticipated by any one of the following **US 3,414,549 to Schaeffgen et al., US 3,391,119 to Anderson and JP 2002/090996 A to Kodama et al.**, each individually or in combination. **It should be noted that it might take totally different synthetic method to synthesize such a claimed monomer and/or polymer even the difference is only on a small substituent.** In summary, these types of monomers have no common features in the preparation as well as its

Art Unit: 1713

application since they are structurally different. The scope of the claims, i.e., the metes and boundaries are distinct. Accordingly, the special technical feature linking the inventions, making monomers/copolymers comprising OH-containing monomers from Groups I, V and VI, or making monomers/copolymers comprising carbonyl-containing monomers from Groups II, III and IV does not provide a contribution over the prior art, and no single general inventive concept exists. Therefore the restriction is appropriate

8. Because these inventions are distinct for the reasons given above shown as different subject matters and the search required for each group is not required for other groups have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Applicant is required under 35 U.S.C. 121 **to elect a single disclosed species for prosecution of Group I** on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, **Claims 1, 7 and 9-10 are generic.**

9. Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Art Unit: 1713

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

10. It is noted that no phone call was made to **Abraham J. Rosner (tel: 202 293-7060)** by the examiner due to the complexity in this particular case. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).


11. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143). Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the

Art Unit: 1713

application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

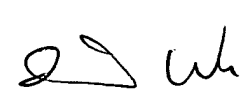
Conclusion

8. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Dr. Henry S. Hu whose telephone number is **(571) 272-1103**. The examiner can be reached on Monday through Friday from 9:00 AM –5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The fax number for the organization where this application or proceeding is assigned is **(571) 273-8300** for all regular communications. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Henry S. Hu

Patent Examiner, art unit 1713, USPTO

September 27, 2005


DAVID W. WU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700